

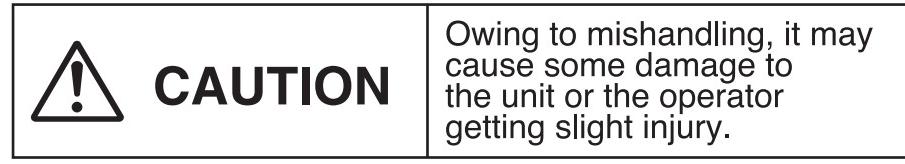
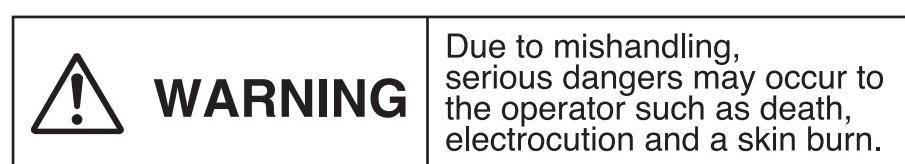
# **TTM-00B "BOARD TYPE" USER'S MANUAL**

## **DIGITAL TEMPERATURE CONTROLLER**

Thank you for purchasing model **TTM-00B**  
**"BOARD TYPE"** Digital Temperature Controller.  
Please go through carefully this Instruction Manual  
and use the unit in proper manner.

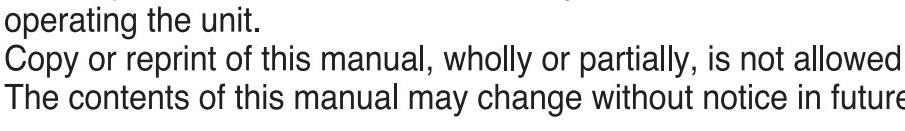
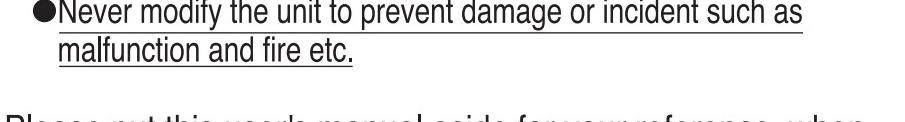
## **NOTICE/WARNING BEFORE OPERATION USE**

- When having the purchased controller at hand, please be sure that its unit is a correct model (See the following "Model Configuration" ).
  - The following symbol marks  provide to prevent incident or damage. Kindly refer to the details of the WARNING/CAUTION when using for the first time.
  - Another copy of the user's manual "Advanced Version" is provided at customer's request.



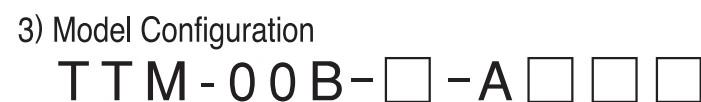
**! CAUTION**

- For prevention of its malfunction, do not push the front key with sharp points.
  - Spare terminal must not be used for other purposes.



## **ACCESSORY & CONFIGURATION**

- 1) Please be sure that the unit enclosed in packing carton is a right model before using.
  - 2) Kindly check the following accessory being containd in that carton box.
    - This user's manual : 1 copy
    - Control board : 1 pce
    - Display board : 1 pce
    - Connection cable (30 mm length) : 1 pce



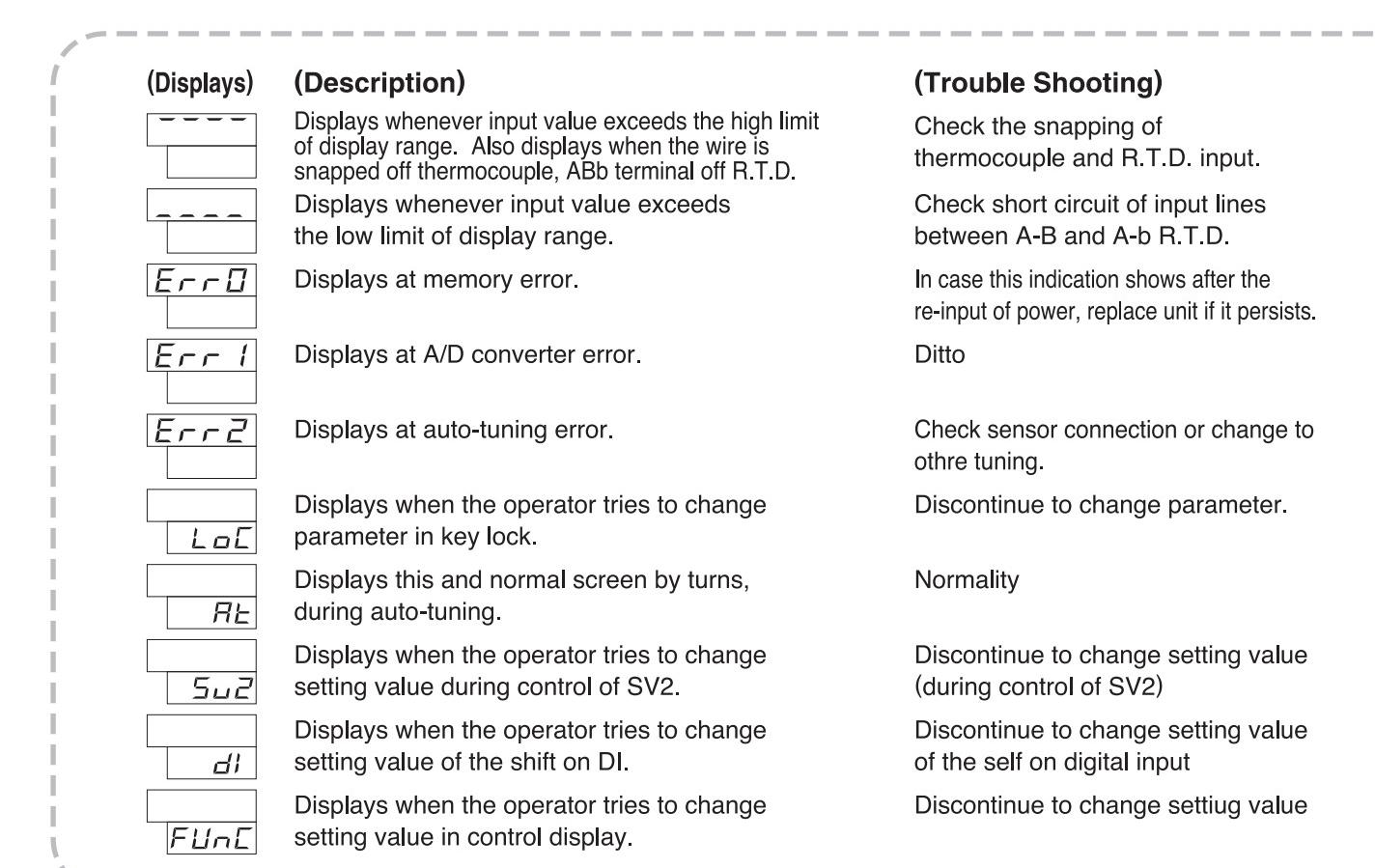
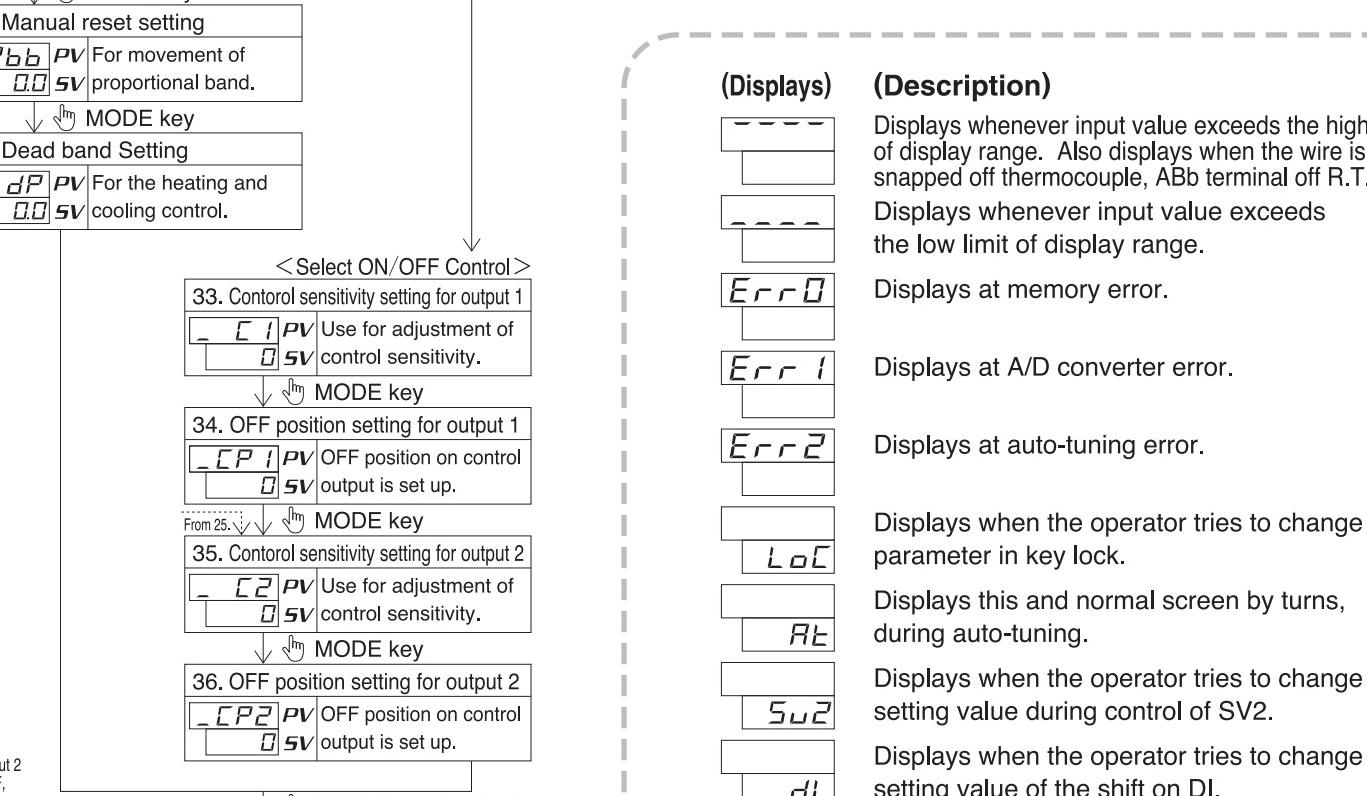
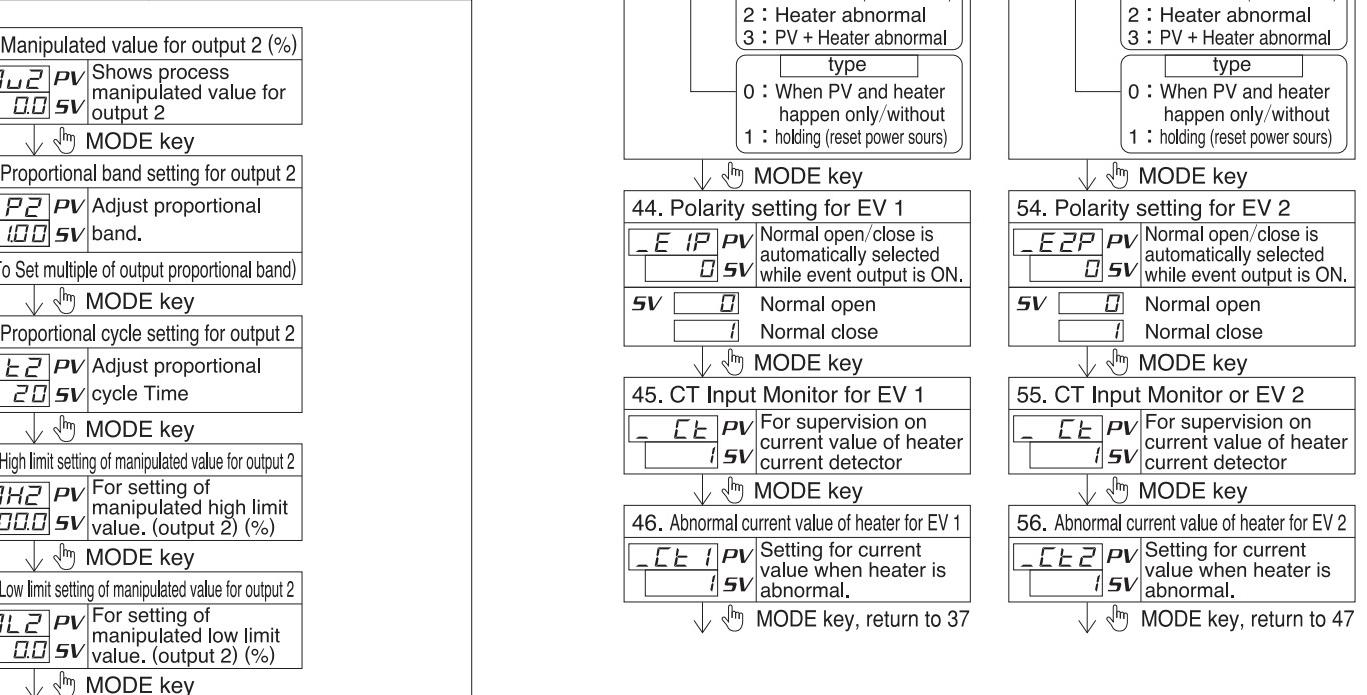
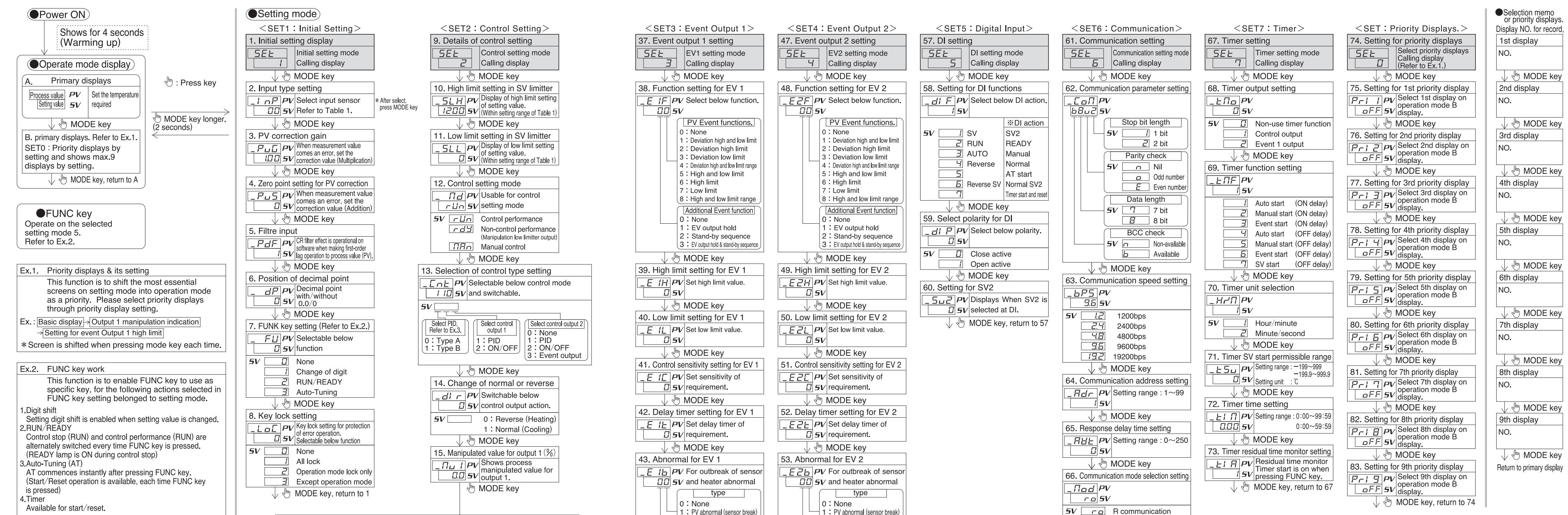
OUTPUT 1	CODE	OPTION	CODE
Relay contact	R	Event2 (Relay contact output2)	B
SSR drive voltage	P	Ouput 2 (SSR drive voltage)	P
		CT input	D
		DI (Digital input)	E
		Communication RS-485	M

## SPECIFICATIONS

Power Supply Voltage	100 to 240V AC, 50/60Hz
Power Consumption	Below 10 VA
Memory Element	EEPROM
Input of Sensor	Thermocouple/R.T.D. (Change by front key)
Control Output	Relay contact, SSR drive voltage
Control Method	Two kinds of PID, ON/OFF
Operation Environment	0 to 50°C, 20 to 90%RH (Avoid making dew)
Storage Environment	-25 to 70°C, 5 to 95%RH (Avoid making dew)
Weight	Less than 90g
Location of the Unit Setting	Away from the followings. <ul style="list-style-type: none"> <li>• Gas of corrosion, dust and oily smoke.</li> <li>• The generator of electric noise.</li> <li>• The influence of electromagnetic field.</li> <li>• Mechanical vibration and shock.</li> <li>• The direct sunshine.</li> </ul>
Installation condition	Installation category II

**OPERATION FLOW AND SETTING MENU** Setting display shows the existence of option.

Setting display shows the existence of option.



## **CAUTION BEFORE CONTROL**

- Setting program is stored after power OFF, as non-volatile memory is equipped with TTM-00B controllers for setting storage.
  - Input is the universal type, either thermocouple or R.T.D. (Pt 100/JPt 100) by pressing the front key.  
For suitable application, please select the most appropriate sensor and adjust sensor setting.
  - PID or ON/OFF control is selective for the optimal performance and each detail of features is specified in the table on the right side.

	PID Control	ON/OFF Control
Merit	Better control result is achieved as opposed to that of ON/OFF control.	Life span of relay is generally longer, as it is ON when temperature is below SV and it is OFF when temperature is over SV (For heating control).
Demerit	Life span of relay is shorter, as output exists frequently with relay contact .	Control value is worse in comparison with that of PID control.

- ※ PID constants are automatically reckoned up to write in, when control begins or SV is altered on self-tuning.

※ See also "PART INDICATION" & "INSTALLATION AND WIRING" on the reverse

